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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/658,139	09/09/2003	Ed H. Frank	14182US02	3006
23446	7590	06/23/2011	EXAMINER	
MCANDREWS HELD & MALLEY, LTD			HOANG, HIEU T	
500 WEST MADISON STREET			ART UNIT	PAPER NUMBER
SUITE 3400			2452	
CHICAGO, IL 60661				
NOTIFICATION DATE		DELIVERY MODE		
06/23/2011		ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ED H. FANK, RICHARD MARTIN, and MICHAEL DOVE

Appeal 2009-009483
Application 10/658,139
Technology Center 2400

Before HOWARD B. BLANKENSHIP, JAY P. LUCAS, and
JEFFREY S. SMITH, *Administrative Patent Judges*.

SMITH, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

This is an appeal under 35 U.S.C. § 134(a) from the Examiner's final rejection of claims 1-31, which are all the claims in the application. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

Invention

Appellants' invention relates to an access device that is initially authenticated upon initiating communication with a first access point. Authentication information related to the initial authentication is provided to a second access point and/or a third access point. The first, second, or third access provides service to the access device based on the initial authentication. The initial authentication information is stored and subsequently retrieved by the second and/or third access point. The second access point retrieves the initial authentication information when the access device migrates from a first coverage area associated with the first access point to a second coverage area associated with the second access point. Similarly, the third access point retrieves the initial authentication information when the access device migrates from one of the first coverage area and the second coverage area to a third coverage area associated with the third access point. Abstract.

Representative Claim

1. A method for providing seamless connectivity and communication in a multi-band, multi-protocol network, the method comprising:

initially authenticating an access device upon said access device initiating communication with a first access point;

providing authentication information related to said initial authentication to at least one of a second access point and a third access point; and

servicing said access device by one of said first access point, said second access point and said third access point based on said initial authentication.

Examiner's Rejections

Claims 1-7, 9-17, and 19-31 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Ala-Laurila (US 6,587,680 B1).

Claims 8, 18, and 28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ala-Laurila and Bhagwat (US 6,651,105 B1).

Claim Groupings

In view of Appellants' arguments in the Appeal Brief, we will decide the appeal on the basis of claims 1-10. *See* 37 C.F.R. § 41.37(c)(1)(vii).

PRINCIPAL ISSUES

(1) Has the Examiner erred in finding that Ala-Laurila describes "providing authentication information related to said initial authentication to at least one of a second access point and a third access point" and "servicing said access device by one of said first access point, second access point and said third access point based on said initial authentication" as recited in claim 1?

(2) Has the Examiner erred in finding that the combination of Ala-Laurila and Bhagwat would have taught "distributing said initial authentication information to said second access point and said third access point upon said initial authenticating" as recited in claim 8?

FINDINGS OF FACT

Ala-Laurila describes that authentication of a mobile terminal during a handover event is achieved by a challenge/response procedure. In accordance with this challenge/response procedure the new access point (AP) sends a challenge to the mobile terminal, whereupon the mobile terminal (MT) responds by sending a response to the new AP. An authentication key for both ends of the communication pair that is made up of a mobile terminal and an AP is originally generated by a scaleable key management protocol, for example Internet Key Exchange (IKE). Security associations are transferred between the various APs that are within the wireless communication system in order to avoid the need for a new and different key exchange during each handover. The keys and their related information are requested by a new AP during a handover process, and the keys and other information are transferred from the old AP to the new AP in one or more handover messages that pass between the old AP and the new AP. The exchange of authentication challenges and the responses thereto are integrated into handover signaling that occurs between the new AP and the mobile terminal that is involved in the handover. Col. 5, ll. 37-58; col. 7, l. 46 to col. 8, l. 41.

PRINCIPLES OF LAW

Claim Interpretation

During examination, claims are to be given their broadest reasonable interpretation consistent with the specification, and the language should be read in light of the specification as it would be interpreted by one of ordinary skill in the art. *In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1364 (Fed.

Cir. 2004) (citations omitted). The Office must apply the broadest reasonable meaning to the claim language, taking into account any definitions presented in the specification. *Id.* (citations omitted).

Anticipation

For a prior art reference to anticipate in terms of 35 U.S.C. § 102, every element of the claimed invention must be identically shown in a single reference. However, this is not an “*ipsissimis verbis*” test. *In re Bond*, 910 F.2d 831, 832 (Fed. Cir. 1990).

Obviousness

“What matters is the objective reach of the claim. If the claim extends to what is obvious, it is invalid under § 103.” *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 419 (2007). “The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *Id.* at 416.

ANALYSIS

Section 102 rejection of claims 1, 11, 21, and 31

Appellants contend that Ala-Laurila does not describe “providing authentication information related to said initial authentication to at least one of a second access point and a third access point” as recited in claim 1. Appellants also contend that Ala-Laurila does not describe “servicing said access device by one of said first access point, second access point and said third access point based on said initial authentication” as recited in claim 1. In particular, Appellants contend that Ala-Laurila’s security association parameter exchange procedure is separate and independent of the authentication procedure using challenges and responses. According to

Appellants, no security association information is used in any of the authentication messages throughout the entire authentication process. App. Br. 10-15.

Ala-Laurila describes generating an authentication key or security association for a mobile terminal and an access point, which is used by the access point to authenticate the mobile terminal. Col. 4, ll. 33-45; col. 5, ll. 43-50. Ala-Laurila further describes transferring the authentication key from an old access point to a new access point during a handover. Col. 5, ll. 51-58; col. 8, ll. 23-29. The authentication key is “authentication information related to said initial authentication” within the meaning of claim 1. Therefore, transferring the authentication key to a second access point as disclosed by Ala-Laurila describes “providing authentication information related to said initial authentication to at least one of a second access point and a third access point” as recited in claim 1. Further, the first access point described by Ala-Laurila services the mobile terminal based on the initial authentication. Therefore, Ala-Laurila describes “servicing said access device by one of said first access point, second access point and said third access point based on said initial authentication” as recited in claim 1.

In the Reply Brief, Appellants contend that Ala-Laurila’s security associations are only used for purposes of minimizing the need of exchanging security messages, but only after device authentication has taken place. According to Appellants, the authentication information is not related in any way to the initial authentication. Reply Br. 5. However, the security association that is transferred as described by Ala-Laurila includes an authentication key, which is used in the initial authentication. Col. 4, ll. 33-41; col. 5, ll. 43-58. .

Section 102 rejection of claims 2, 12, and 22

Appellants contend that Ala-Laurila discloses an access point that retrieves security association parameters from a security association database, but does not disclose “storing said initial authentication information” as recited in claim 2. App. Br. 16. However, the security association parameters include the authentication key used in the initial authentication. Therefore, the security association database that stores the security association parameters describes “storing said initial authentication information” as recited in claim 2.

Section 102 rejection of claims 3, 13, and 23

Appellants contend that Ala-Laurila does not describe “retrieving said stored initial authentication information by said second access point and said third access point” as recited in claim 3. In particular, Appellants contend that Ala-Laurila does not disclose that authentication information is retrieved by two separate access points. App. Br. 17. The Examiner finds that Ala-Laurila shows one new access point in figures 2 and 3 for the sake of brevity, however, more than one access point can be used. Ans. 9, citing col. 6, ll. 41-44 of Ala-Laurila. Appellants respond that sending information from device A to device B is not the same as retrieving information by device B. Reply Br. 7.

Ala-Laurila describes that the new access point sends a handover request to the old access point, then the old access point sends the security association to the new access point. Col. 9, ll. 57-64. We find that “retrieving said stored initial authentication information by said second access point and said third access point” encompasses handover requests

from new access points that result in receiving the security association as described by Ala-Laurila.

Section 102 rejection of claims 4, 14, and 24

Appellants contend that the security association described by Ala-Laurila is not authentication information. Appellants also contend that Ala-Laurila discloses that the security association is only sent to a second access point, not to a second and third access point. App. Br. 19. We find that the security association is authentication information as discussed in the analysis of claim 1. Further, Appellants have not provided evidence or persuasive argument to rebut the Examiner's finding that Ala-Laurila shows one new access point in the figures for brevity, but describes using multiple new access points in column 6, lines 41-44.

Section 102 rejection of claims 5, 15, and 25

Appellants contend that the security association described by Ala-Laurila is not authentication information. Appellants also contend that Ala-Laurila only discloses that the security association is only sent to a second access point, not to a second and third access point. Appellants further contend that only the old access point retrieves initial authentication information. App. Br. 20-21.

We find that the security association is authentication information as discussed in the analysis of claim 1. Further, Appellants have not provided evidence or persuasive argument to rebut the Examiner's finding that Ala-Laurila shows one new access point in the figures for brevity, but describes using multiple new access points in column 6, lines 41-44. We find that the

new access points perform “retrieving said initial authentication information” as discussed in the analysis of claim 3.

Section 102 rejection of claims 6, 16, and 26

Appellants contend that the security association described by Ala-Laurila is not authentication information. Appellants also contend that Ala-Laurila only discloses that the security association is only sent to a second access point, not to a second and third access point. Appellants further contend that only the old access point retrieves initial authentication information. App. Br. 22.

We find that the security association is authentication information as discussed in the analysis of claim 1. Further, Appellants have not provided evidence or persuasive argument to rebut the Examiner’s finding that Ala-Laurila shows one new access point in the figures for brevity, but describes using multiple new access points in column 6, lines 41-44. We find that the new access points perform “retrieving said initial authentication information” as discussed in the analysis of claim 3.

Section 102 rejection of claims 7, 17, and 27

Appellants contend that the security association described by Ala-Laurila is not authentication information. Appellants also contend that Ala-Laurila only discloses that the security association is only sent to a second access point, not to a second and third access point. Appellants further contend that only the old access point retrieves initial authentication information. App. Br. 23-24.

We find that the security association is authentication information as discussed in the analysis of claim 1. Further, Appellants have not provided evidence or persuasive argument to rebut the Examiner's finding that Ala-Laurila shows one new access point in the figures for brevity, but describes using multiple new access points in column 6, lines 41-44. We find that the new access points perform "retrieving said initial authentication information" as discussed in the analysis of claim 3.

Section 102 rejection of claims 9, 19, and 29

Appellants contend that Ala-Laurila does not describe "transparently transferring" the security association. App. Br. 25. The Examiner finds that "transparently transferring" encompasses automatically transferring the security association from the old access point to the new access point. Ans. 9-10. Appellants have not provided evidence or persuasive argument to rebut the Examiner's finding.

Section 102 rejection of claims 10, 20, and 30

Appellants contend that Ala-Laurila does not describe "transparently transferring" the security association. App. Br. 26. We find that Ala-Laurila describes transparently transferring for the reasons given by the Examiner on pages 9 and 10 of the Answer.

Section 103 rejection of claims 8, 18, and 28

Appellants contend that neither Ala-Laurila nor Bhagwat teaches "distributing said initial authentication information to said second access

point and said third access point upon said initial authenticating” as recited in claim 8. App. Br. 27-28.

Appellants’ contention appears based on the premise that “distributing ... upon said initial authenticating” is somehow different than distributing a security association after initially authenticating a mobile terminal.

However, Appellants have not provided a definition of “distributing said initial authentication information to said second access point and said third access point upon said initial authenticating” that excludes sending the security association to second and third access points after initially authenticating the mobile terminal as described by Ala-Laurila. Nor have Appellants provided evidence or persuasive argument to distinguish “distributing said initial authentication information to said second access point and said third access point upon said initial authenticating” from sending the security association to second and third access points after initially authenticating the mobile terminal. We find that the broadest reasonable interpretation of the “distributing” limitation encompasses sending a security association to multiple access points after initially authenticating a mobile terminal as described by Ala-Laurila.

In the Reply Brief, Appellants contend that Bhagwat only teaches retrieving authentication information as a device moves from one access point to another, but does not teach distributing authentication information to at least two other access points. According to Appellants, retrieving information by device B is different from distributing information by device A to device B. Reply Br. 8-9. Appellants have not provided a definition of distributing authentication information to at least two other access points that excludes retrieving authentication information as taught by Bhagwat.

Summary/conclusion

Based on the foregoing, we are not persuaded that any claim has been rejected in error. We therefore sustain the Examiner's rejections.

CONCLUSIONS OF LAW

(1) The Examiner did not err in finding that Ala-Laurila describes "providing authentication information related to said initial authentication to at least one of a second access point and a third access point" and "servicing said access device by one of said first access point, second access point and said third access point based on said initial authentication" as recited in claim 1.

(2) The Examiner did not err in finding that the combination of Ala-Laurila and Bhagwat would have taught "distributing said initial authentication information to said second access point and said third access point upon said initial authenticating" as recited in claim 8.

DECISION

The rejection of claims 1-7, 9-17, and 19-31 under 35 U.S.C. § 102(e) as being anticipated by Ala-Laurila is affirmed.

The rejection of claims 8, 18, and 28 under 35 U.S.C. § 103(a) as being unpatentable over Ala-Laurila and Bhagwat is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 41.50(f).

AFFIRMED

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